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INSTRUCTION MANUAL

Type 1269-A | POWER SUPPLY

GENERAL RADIO COMPANY

B

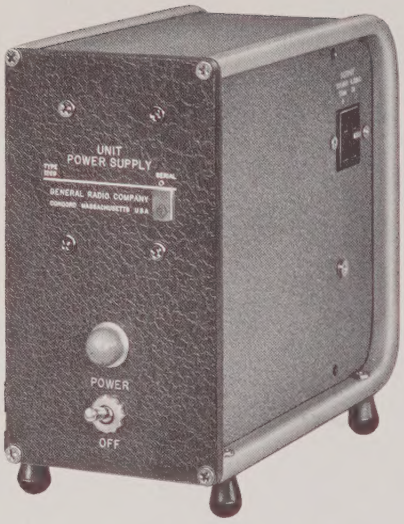


Figure 1-1. 1269 Power Supply.

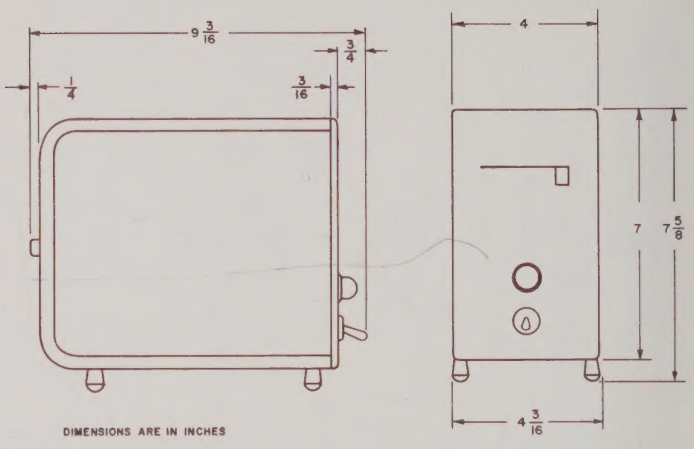


Figure 1-2. Approximate dimensions of the 1269 Power Supply.

SPECIFICATIONS

Output (at nominal input line voltage): 300 volts dc (±5%) at 50 mA, 6.3 volts ac at 3 amperes (with ac load at 1.5 amperes or less, maximum dc load is 65 mA, about 285 volts dc).

Regulation: At no load, dc output is 380 volts.

Ripple: Less than 80 mV rms (120 Hz) at full load.

Input: Nominal 115 (105-125), 215 (195-235), or 230 (210-250) volts, 50 to 60 Hz, 50 watts full load. Operation at 400 Hz is also satisfactory.

Connectors: Line cord permanently attached to instrument. Standard 4-terminal receptacle mounted on cabinet side for convenient connection to rf Unit oscillators.

Accessories Supplied: Mating plug for the 4-terminal receptacle. Spare fuses.

Cabinet: Convertible-bench.

Dimensions: Width 4 ¼, height 7 ⅝, depth 9 ¼ inches (110 by 195 by 235 mm) over-all, not including power cord.

Net Weight: 5 ¾ pounds (2.7 kg).

Shipping Weight: 8 pounds (3.7 kg).

Form 1269-0100-B
ID none
October, 1967

SECTION 1

INTRODUCTION

1.1 PURPOSE.

The 1269 Power Supply is a general purpose source of plate and heater power for laboratory equipment and particularly for 1208, 1209, 1211, 1215, 1218, 1361, 1362, and 1363 oscillators, to which it attaches directly. Connection to other instruments that require about 300 volts dc at 50 milliamperes maximum, and 6.3 volts ac at 3 amperes maximum, can be made by means of a mating connector supplied.

1.2 DESCRIPTION.

The 1269 is housed in a convertible-bench cabinet for use as a bench instrument by itself, or attached to an oscillator by means of hardware furnished with the power supply. An adaptor set is also available for mounting the power supply and oscillator, as an assembly, in a standard 19-inch relay rack.

All external controls and connectors are easily accessible, see Figure 1-1. The POWER/OFF switch and pilot lamp are located on the front panel. The output connector is on the right-hand side of the instrument and the input power cord is on the left-hand side.

1.3 ACCESSORIES.

Accessories normally furnished with the 1269 Power Supply are listed in Table 1-1.

The adaptor sets listed in Table 1-2 are available for mounting the 1269/oscillator assembly in a standard 19-inch relay rack.

Table 1-1

ACCESSORIES SUPPLIED WITH 1269

Part Number	*Description*	*Quantity*
0480-3070	Hardware Set (refer to Table 2-1)	1
4220-0800	Mating plug	1
5330-1100	Fuse, 0.6 A for 115-V operation	2*
5330-0800	Fuse, 0.3 A for 230-V operation	2*

*Fuses (0.6 A) for 115-V operation supplied unless otherwise specified.

Table 1-2

ADAPTOR SETS FOR MOUNTING 1269/OSCILLATOR COMBINATIONS IN A RELAY RACK

Oscillator Type	*Adaptor Set*	*Part No.*
1208, 1209, 1211, 1215	481-P412	0481-9642
1218	481-P416	0481-9646
1361, 1362, 1363	481-P412	0481-9642

SECTION 2

INSTALLATION AND OPERATION

2.1 ELECTRICAL CONNECTIONS.

Connect the 1269 to a 115 V, or 215 V (230 V), 50- to 60-Hz ac line.

To give greater latitude when making external connections, both the 6.3-V and 300-V supplies are isolated from ground.

2.2 RACK MOUNTING.

The power supply and an oscillator can be mounted as an assembly and installed in a standard 19-inch relay rack by means of an appropriate rack-adaptor set (refer to Table 1-2 for type and part number). Instructions for mounting the assembly in a relay rack are furnished with the adaptor set.

2.3 BENCH MOUNTING.

2.3.1 GENERAL.

The 1269 Power Supply can be rigidly attached to General Radio oscillators for bench use. The necessary hardware for assembly of the two instruments is furnished with the power supply and is listed in Table 2-1.

2.3.2 ASSEMBLY WITH OSCILLATOR TYPES 1208, 1209, 1211, AND 1215.

To assemble the power supply and oscillator for bench use, proceed as follows:

a. Remove the rubber feet (A, Figure 2-1) from the oscillator and power supply (inside feet only). Retain screws (B), lockwasher (K), and bracket (C).

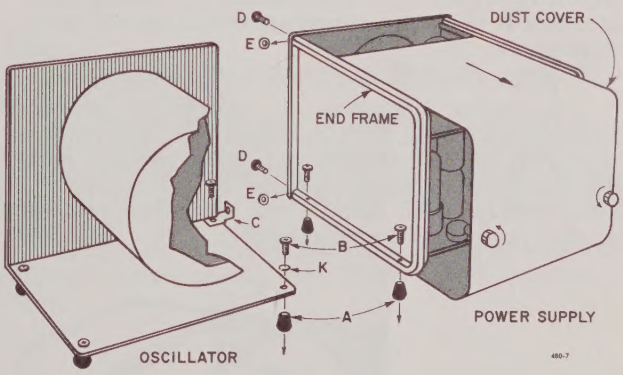


Figure 2-1.

b. On the power supply, remove and retain two screws (D). Then, remove the two 1/16-inch thick spacers (E) from between the front panel and the aluminum end frame.

Table 2-1
HARDWARE SET
(Part Number 0480-3070)

Quantity	*Description*	*Fig. Ref.*	*Part No.*
2	Clip	F	0480-8070
3	Nut, 10-32	I	5810-3300
1	Nut Plate	-	5845-2100
1	Screw, 10-32, 3/8 in.	-	7080-1000
2	Screw, 10-32, 1/2 in.	L	7098-0161
2	Washer, lock, No. 10	H	8040-2400

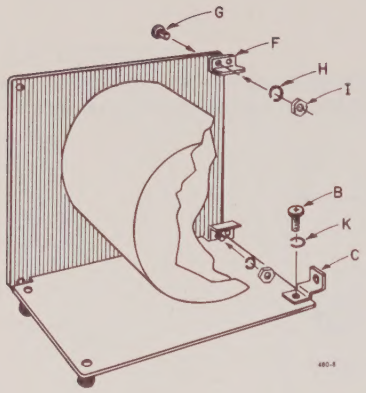


Figure 2-2.

c. On the oscillator (Figure 2-2), install the two clips (F) with screws (G), lockwashers (H), and nuts (I), furnished with the power supply.

d. Install bracket (C) as shown in Figure 2-2, using one footscrew (B) and lockwasher (K) previously removed. The base of the oscillator is tapped to receive the screw.

e. Place the instruments side by side as shown in Figure 2-3. Wrap the power cord around the oscillator shield can and plug it into the 5-pin receptacle on the power supply.

f. The clips (F) should slide into the space originally occupied by the spacers (E) on the right-hand side of the power supply. Reinstall the two front-panel screws (D).

g. Remove the dust cover on the power supply.

h. Insert footscrew (B), previously removed from the oscillator, with lockwasher (K) into the hole in bracket (C) and through the matching hole in the side panel of the power supply. Fasten bracket (C) to the power supply, using a nut provided. Reinstall the dust cover on the power supply.

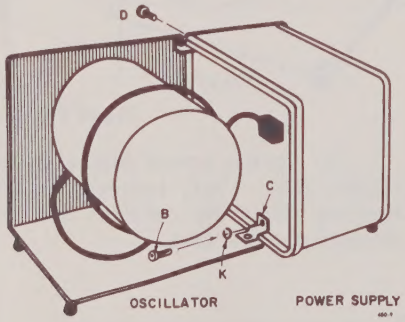


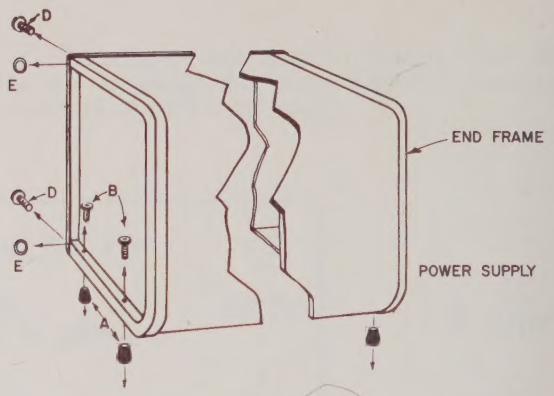
Figure 2-3.

2.3.3 ASSEMBLY WITH OSCILLATOR TYPE 1218.

To assemble the power supply and the Type 1218 oscillator for bench use, proceed as follows:

a. Remove the rubber feet (A) from the oscillator and power supply (Figure 2-4). On the power supply, remove and retain the footscrews.

b. Remove and retain the two bracket screws (C) at the bottom of the oscillator. Remove and retain the two, right-hand side, end-frame screws (D) of the power supply. Remove the two 1/16-inch thick spacers (E) from the power supply.



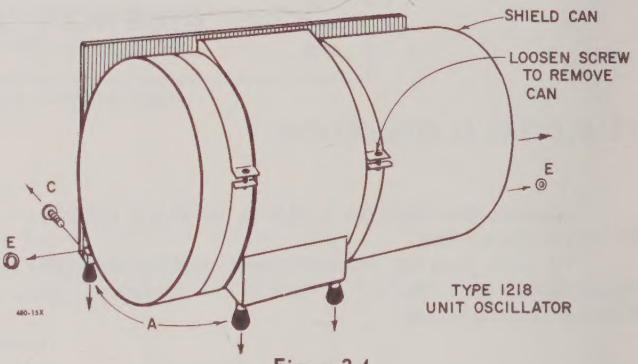


Figure 2-4.

c. Remove the left-hand shield can from the oscillator. To do this, loosen the screw that holds the metal band together, rock the can, and pull it off.

d. Remove the spacer bracket (J) from inside the oscillator and attach it to the threaded hole on the frame of the oscillator (Figure 2-5).

e. Attach the two clips (F) to the left-hand side of the oscillator. Use screw (G), lockwasher (H), and nut (I), furnished with the power supply, at the top. Use screw (C), removed in step b, at the bottom.

f. Remount the shield can on the oscillator. The procedure is the reverse of step c.

g. Connect the five-terminal plug on the right-hand side of the oscillator to its mating receptacle on the left-hand side of the power supply.

h. Place the power supply at the left of the oscillator and push the instruments together, so that the clips attached in step e slide into the space between

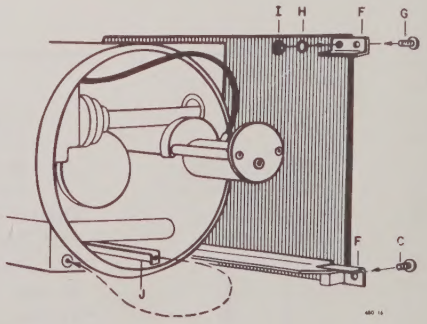


Figure 2-5.

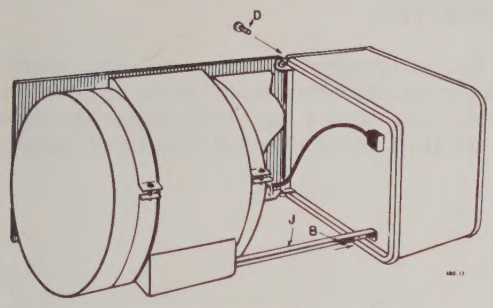


Figure 2-6.

the panel and the end frame of the power supply. Reinstall the two end-frame screws (D) on the right-hand side of the power supply (Figure 2-6).

i. Attach mounting bracket (J) to the power supply using a foot-screw (B) passed through the bracket. A nut is furnished to secure this screw if the hole in the sidewall of the power supply is not tapped.

2.3.4 ASSEMBLY WITH OSCILLATOR TYPES 1361, 1362, AND 1363.

To assemble the power supply and oscillator for bench use, proceed as follows:

a. Remove both rubber feet (A) at the right-hand side of the power supply and the left-hand side of the oscillator (see Figure 2-7).

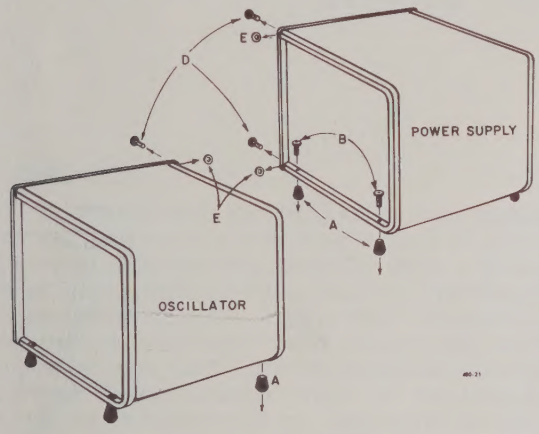


Figure 2-7.

b. Remove the two end-frame attaching screws (D) at the right-hand edge of the power supply and the left-hand edge of the oscillator.

c. Remove the spacers (E) between the panels and the end frames.

d. Insert clips (F) in place of the washers on the power supply (see Figure 2-8). Reinstall panel screws (D).

e. Place the power supply on its left-hand side, close to the oscillator, and attach the 5-pin oscillator plug to the connector on the right-hand side of the power supply.

f. Position the oscillator above the power supply and lower it so that both instruments slide together,

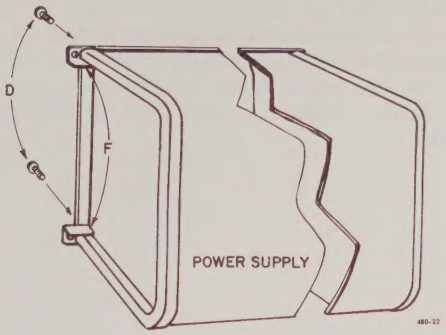


Figure 2-8.

with the exposed ends of clips (F) entering the spacer slots behind the front panel of the oscillator.

NOTE

Form the cord into a flat coil between the side walls of the instruments as they are joined together. Figure 2-9 shows the cord position after assembly.

g. Reinstall front-panel screws (D) in the oscillator.

h. Remove the dust covers from the oscillator and the power supply.

i. Insert two screws (L) (supplied) through the top and bottom clearance holes in the side panel of the oscillator and thread them into the matching tapped holes in the joining walls of the power supply (see Figure 2-9).

j. Set the assembly on its feet, tighten all screws securely, and reinstall dust covers on both instruments.

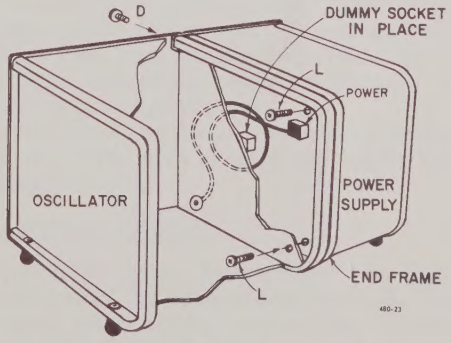


Figure 2-9.

2.4 OPERATING CHARACTERISTICS.

The 1269 Power Supply provides about 300 volts dc at a maximum load of 50 milliamperes. With

no load the output is about 405 volts dc. A 6.3-volt 3-ampere ac heater supply is also provided. If the ac load is limited to 1.5 amperes, as much as 65 milliamperes can be drawn from the 300-volt supply (at about 285 volts). Ripple is less than 80 millivolts ac at full load.

2.5 OPERATION.

The on-off panel switch is the only control. To turn power on, place this switch in the up position. The indicator lamp should light when power is turned on. Allow the instrument about 30 seconds to warm up.

SECTION 3

SERVICE AND MAINTENANCE

3.1 WARRANTY.

We warrant that each new instrument manufactured and sold by us is free from defects in material and workmanship, and that, properly used, it will perform in full accordance with applicable specifications for a period of two years after original shipment. Any instrument or component that is found within the two-year period not to meet these standards after examination by our factory, District Office, or authorized repair agency personnel will be repaired or, at our option, replaced without charge, except for tubes or batteries that have given normal service.

3.2 SERVICE.

The two-year warranty stated above attests the quality of materials and workmanship in our products. When difficulties do occur, our service engineers will assist in any way possible. If the difficulty cannot be eliminated by use of the following service instructions, please write or phone our Service Department (see rear cover), giving full information of the trouble and of steps taken to remedy it. Be sure to mention the type and serial numbers of the instrument.

Before returning an instrument to General Radio for service, please write to our Service Department or nearest District Office, requesting a Returned Material Tag. Use of this tag will ensure proper handling and identification. For instruments not covered by the warranty, a purchase order should be forwarded to avoid unnecessary delay.

3.3 DUST COVER REMOVAL.

To remove the cover, loosen the two thumbscrews at the back of the instrument. These screws will unlock on the first turn, but should be loosened the maximum amount before the cover is removed. Pull the cover off the instrument.

When replacing the cover, be sure that it engages in the slots on the back of the panel before you tighten the locking screws.

3.4 FUSE REPLACEMENT.

The 1269 Power Supply uses two Slo-Blo line fuses, accessible for replacement when the dust cover is removed. Sizes are 0.6 ampere for 115-volt input 0.3 ampere for 230-volt lines.

3.5 CONVERSION TO DIFFERENT LINE VOLTAGE.

The power supply can easily be converted from operation on one line voltage to operation on another by changing connections to the primary of the power transformer (see Figure 3-1 for instructions).

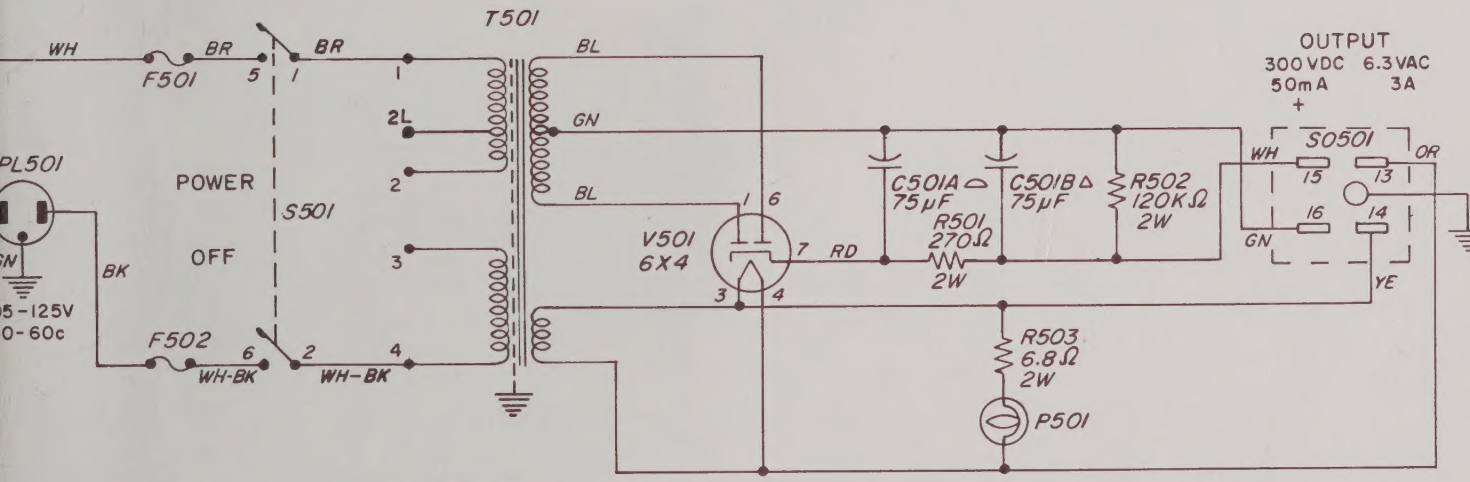
FEDERAL MANUFACTURERS CODE

From Federal Supply Code for Manufacturers Cataloging Handbooks H4-1 (Name to Code) and H4-2 (Code to Name) as supplemented through June, 1967.

Code	Manufacturers Name and Address
01121	Allen-Bradley, Co., Milwaukee, Wisc.
04009	Arrow, Hart and Hegeman Electric Co., Hartford, Conn. 06106
12672	RCA Commercial Receiving Tube and Semiconductor Div., Woodridge, N. J.
24454	G. E., Electronic Comp., Syracuse, N. Y.
24655	General Radio Co., W. Concord, Mass. 01781
37942	P. R. Mallory and Co. Inc., Indianapolis, Ind.
71400	Bussman Mfg. Div. of Mc Graw Edison Co., St. Louis, Mo.
71785	Cinch Mfg. Co. and Howard B. Jones Div., Chicago, Ill. 60624
72765	Drake Mfg. Co., Chicago, Ill. 60656

PARTS LIST

REF NO.	DESCRIPTION	PART NUMBER	FMC	MFG. PART NO.	FED. STOCK NO.
R501	RESISTOR, Composition 270Ω ±10%	6120-1279	01121	HB, 270 Ω ±10%	
R502	RESISTOR, Composition 120 kΩ ±10%	6120-4129	01121	HB, 120 kΩ ±10%	
R503	RESISTOR, Wire-wound 6.8Ω ±10%	Part of 7510-1930			
C501A C501B	CAPACITOR, Electrolytic Block 75 µF 450 V 75 µF 450 V	4460-1900	37942	20-1075-99-S3C1X2	5910-822-4715
F501	FUSE 115 V: 0.6 A	5330-1100	71400	MDL, 0.6 Amp.	5920-280-3161
	230 V: 0.3 A	5330-0800	71400	MDL, 0.3 Amp.	5920-235-8362
F502	FUSE 115 V: 0.6 A	5330-1100	71400	MDL, 0.6 Amp.	5920-280-3161
	230 V: 0.3 A	5330-0800	71400	MDL, 0.3 Amp.	5920-235-8362
P501	PILOT LAMP	5600-0700	24454	MAZDA 44	6240-057-2887
PL501	POWER CABLE	4200-1800	24655	4200-1800	5995-738-6521
S501	SWITCH	7910-1300	04009	83053-5A	5930-909-3510
SO501	SOCKET	4230-0700	71785	S-2404-SB	5935-644-6594
T501	TRANSFORMER	0485-4027	24655	0485-4027	
V501	TUBE, Type 6X4	8360-8100	12672	6X4	5960-581-8639
	SOCKET ASSEMBLY (Including R503)	7510-1930	24655	7510-1930	6210-475-9501
	PLUG	4220-0800	71785	P2404CCT	
	MONOGRAM TAB	5580-0802	24655	5580-0802	
	PILOT LIGHT CAP	5620-0300	72765	25P Unfluted PSP-70	6210-299-3902



FOR 115V OPERATION CONNECT:
1 TO 3 AND 2 TO 4
F501 & F502 = 0.6 AMP SLO-BLO

FOR 230V OPERATION CONNECT:
2 TO 3
F501 & F502 = 0.3 AMP SLO-BLO

FOR 215 V OPERATION CONNECT
2L TO 3

F501 AND F502=0.3 AMP SLO-BLO

Figure 3-1. Schematic diagram for the 1269-A Power Supply.

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